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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,222	03/01/2004	Geoffrey Outhred	MS1-2019US	3945

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EXAMINER	
BATES, KEVIN T	

ART UNIT	PAPER NUMBER
2456	

NOTIFICATION DATE	DELIVERY MODE
02/17/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/791,222	OUTHRED ET AL.	
	Examiner	Art Unit	
	KEVIN BATES	2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-14,44 and 45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-14,44 and 45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7-31, 11-2, 11-16-09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication made on November 16, 2009.

The Information Disclosure Statements filed July 31, 2009, November 2, 2009, and November 16, 2009 have been considered.

Claim 45 has been newly added.

Claims 1-3, 6-14 and 44-45 are currently pending in this application.

Election/Restrictions

This application contains claims 15-43 drawn to an invention nonelected with traverse in the reply filed on July 16, 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6-14 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graupner (7035930) in view of Abu El Ata (6311144).

Regarding claim 1, Graupner teaches a method comprising:

Receiving, by a system validation computing device, a description of a system being deployed (Col. 2, line 65 – Col. 3, line 1);

Receiving, by a system validation computing device, a description of an environment that simulates a target-deployment environment in which the system is deployed (Col. 3, lines 1 – 5); and

Using, by the system validation computing device, both of the received descriptions to validate the system against the environment (Col 10, line 60 Col. 11, line 1) while the system is being designed and prior to attempting to deploy the system.

Graupner does not explicitly indicate that the system is still being designed, and has yet to be deployed in any environment.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24 – 27; Col. 19, lines 13 – 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Regarding claim 6, Graupner teaches one or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to:

accessing an application description that describes an application in the process of being designed by a program running on the one or more processors (Col. 2, line 65 – Col. 3, line 1); and

validating the application, using the application description, against a simulated environment (Col 10, line 60 Col. 11, line 1).

Graupner does not explicitly indicate that the system is still being designed, and has yet to be deployed in any environment.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24 – 27; Col. 19, lines 13 – 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Regarding claim 11, Graupner teaches an apparatus comprising:

using one or more documents describing a system, the system being modeled based on the one or more documents (Col. 6, lines 1 – 10);

a simulator configured to simulate an environment of a data center and validate the system against the environment (Col. 4, lines 39 – 50); and

an expansion engine to identify a top-level definition from one of the one or more documents and expand the top-level definition to populate an instance space by instantiating members nested in the top-level definition (Col. 3, lines 4 – 26; Col. 6, lines 1 – 24);

the apparatus being separate from the data center and the apparatus being comprised, at least in part, of a computer hardware component (*See* Fig. 4).

Graupner does not explicitly indicate a verifier configured to check one or more documents describing a software application for errors in order for the loader to load

a loader configured to load the one or more documents describing the software application, the software application being designed when the one or more documents are loaded;

or that the system is still being designed and has yet to be deployed in any environment.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45)

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24 – 27; Col. 19, lines 13 – 42)

a verifier configured to check one or more documents describing a software application for errors in order for the loader to load or that the system is still being designed and has yet to be deployed in any environment (Col. 6, lines 28 – 43); and

. a loader configured to load the one or more documents describing the software application, the software application being designed when the one or more documents are loaded (Col. 6, lines 44 – 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Regarding claim 44, Graupner teaches an apparatus for facilitating validation of a software application being designed prior to attempting to deploy the software application, the apparatus comprising:

using one or more documents describing a system, the system being modeled based on the one or more documents (Col. 6, lines 1 – 10);

a simulator configured to simulate an environment of a data center and validate the system against the environment (Col. 4, lines 39 – 50); and

an expansion engine to identify a top-level definition from one of the one or more documents and expand the top-level definition to populate an instance space by instantiating members nested in the top-level definition (Col. 3, lines 4 – 26; Col. 6, lines 1 – 24);

a flow engine configured to identify flows in the instance space, to identify the values of inputs to the flows, and to set an output of the flow based on the inputs to the flows (Col. 10, lines 12 – 44; Col. 11, line 15 – 67);

a constraint engine configured to identify and evaluate constraints in the instance space (Col. 10, lines 60 – 61; Col. 7, lines 4 – 41);

the apparatus being separate from the data center and the apparatus being comprised, at least in part, of a computer hardware component (*See* Fig. 4).

Graupner does not explicitly indicate a verifier configured to check one or more documents describing a software application for errors in order for the loader to load

a loader configured to load the one or more documents describing the software application, the software application being designed when the one or more documents are loaded;

or that the system is still being designed and has yet to be deployed in any environment.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24 – 27; Col. 19, lines 13 – 42)

a verifier configured to check one or more documents describing a software application for errors in order for the loader to load or that the system is still being designed and has yet to be deployed in any environment (Col. 6, lines 28 – 43); and

. a loader configured to load the one or more documents describing the software application, the software application being designed when the one or more documents are loaded (Col. 6, lines 44 – 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Regarding claim 2, Graupner teaches a method as recited in claim 1, the description of the system comprising an SDM document (Col. 2, line 65 – Col. 3, line 1; Col 6, lines 1 - 10).

Regarding claim 3, Graupner teaches a method as recited in claim 1, the description of the environment comprising a LIM document (Col. 3, lines 1 – 5; Col 6, lines 1 - 10).

Regarding claim 7, Graupner teaches one or more computer readable media as recited in claim 6, the plurality of instructions further causing the processor to: receive, from a requester, a request to validate the system; and return, to the requestor, a result of the validation (Col 10, line 60 Col. 11, line 1; Col. 8, lines 26 – 32).

Regarding claim 8, Graupner teaches one or more computer readable media as recited in claim 6, wherein the instructions that cause the one or more processors to validate the system against the simulated environment further cause the one or more processors to:

select a top-level definition from the system description;

generate an appropriate instance, as described by the top-level definition, for an instance space;

select an additional definition nested within the top-level definition;

generate an appropriate instance, as described by the additional definition, for the instance space based on whether the selected definition defines an object or a relationship; and

continue the selection of an additional definition and the generation of an appropriate instance, as described by the additional definition, until instances for all of the definitions nested within the top-level definition have been generated for the instance space (Col. 3, lines 4 – 26; Col. 6, lines 1 – 24).

Regarding claim 9, Graupner teaches one or more computer readable media as recited in claim 6, wherein the instructions that cause the one or more processors to validate the system against the simulated environment further cause the one or more processors to: identify one or more flows in an instance space, the instance space describing the system; for each of at least one of the one or more flows: identify one or more input values for the flow, the input values being obtained from other instances of the instance space; and generate, based at least in part on the input values, an output value for the flow (Col. 10, lines 12 – 44; Col. 11, line 15 – 67).

Regarding claim 10, Graupner teaches one or more computer readable media as recited in claim 6, wherein the instructions that cause the one or more processors to validate the system against the simulated environment further cause the one or more processors to: identify one or more constraints in an instance space, the instance space

describing the system; check whether the one or more constraints are satisfied; and return, for each of the one or more constraints, a value indicating whether the constraint is satisfied (Col. 10, lines 60 – 61; Col. 7, lines 4 – 41).

Regarding claim 12, Graupner teaches an apparatus as recited in claim 11, further comprising: an expansion engine to identify a top-level definition from one of the one or more documents and expand the top-level definition to populate an instance space by instantiating members nested in the top-level definition (Col. 3, lines 4 – 26; Col. 6, lines 1 – 24).

Regarding claim 13, Graupner teaches an apparatus as recited in claim 12, further comprising: a flow engine to identify flows in the instance space, identify the values of inputs to the flows, and setting an output of the flow based on the inputs to the flows (Col. 10, lines 12 – 44; Col. 11, line 15 – 67).

Regarding claim 14, Graupner teaches an apparatus as recited in claim 13, further comprising: a constraint engine to identify and evaluate constraints in the instance space (Col. 10, lines 60 – 61; Col. 7, lines 4 – 41).

Regarding claim 45, Graupner teaches a method for facilitating validation of a system being designed prior to attempting to deploy the system, the method comprising:

receiving, from a requestor, a request to validate an application (Col. 8, lines 18 – 25); receiving, by a system validation computing device configured to facilitate validation of a system being designed prior to attempting to deploy the system, a description of the system being designed (Col. 2, line 65 – Col. 3, line 1), the description of the system

comprising an System Definition Model (SDM) document (Col. 2, line 65 – Col. 3, line 1; Col 6, lines 1 - 10);

receiving, by the system validation computing device, a description of an environment that simulates a target-deployment environment (Col. 3, lines 1 – 5)t, the description of the environment comprising a Logical Infrastructure Model (LIM) document, wherein the target-deployment environment (Col. 3, lines 1 – 5; Col 6, lines 1 - 10);

based upon both of the received descriptions, validating, by the system validation computing device, the system against the simulated environment while the system is being designed (Col 10, line 60 Col. 11, line 1); and

returning, to the requestor, a result of the validating (Col. 8, lines 43 – 46).

Graupner does not explicitly indicate that the system is still being designed, and has yet to be deployed in any environment.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24 – 27; Col. 19, lines 13 – 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Response to Arguments

Applicant's arguments filed November 16, 2009 have been fully considered but they are not persuasive.

First note as previously discussed, Graupner teaches that the system which is modeled and deployed is distributed to a data center (Col. 1, lines 49 - 67), furthermore Abu El Ata discloses that the application system being distributed can be mapped to hardware elements such as distributed databases (Col. 6, lines 24 – 27). It would have been obvious to one of ordinary skill that the combination of the reference would include the concept that the distributed application being tested and validated is to be deployed to a system such as a data center.

The applicant argues that the combination of Graupner and Abu El Ata does not teach a system validation server that gets configured to validate the system being deployed, but not yet so. The examiner disagrees, Graupner teaches the method of validating an application against its target deployment center based on models in such those model designs are tested against simulated testing situations and environments (Col. 4, lines 35 – 50) and use that to determine the best setup of the applications and environment which meet the necessary constraints and demands of the system (Col. 5, lines 7 – 26; Col. 7, lines 42 – 67) and the model is tested upon until it is operational and operable within the target environment (Col. 8, lines 4 - 17). So as shown Graupner teaches the limitations of having a application design system which is then

validated in its operational and deployment status. Abu El Ata is only relied upon to show that the system does not need to be currently deployed and operating before testing and simulating occurs.

The applicant argues that optimalization is not the same as validation. While this is somewhat true, Graupner determines as part of its optimization process about how certain models operation within the simulated testing environment, that system must be operation according to the contraints that have been places on the system (Col. 5, lines 23 - 26; and before any deployment of the altered system can occur it must be in the operational state (Col. 6, lines 1 - 10).

The applicant further argues that the combination does not teach simulating the system of a data environment center. The examiner disagrees; Graupner teaches the system gets simulated in terms of the testing environment (Col. 4, lines 39 - 50) and as perviously discussed as part of Graupner's embodiments that includes the concept of the system can be a data center.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on M-F 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN BATES/
Primary Examiner, Art Unit 2456